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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,406	09/11/2003	Chin-Chin Chang	midway.606	5849

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EXAMINER

ASHLEY, BOYER DOLINGER

ART UNIT PAPER NUMBER

3724

DATE MAILED: 03/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/660,406

Applicant(s)

CHANG, CHIN-CHIN

Examiner

Boyer D. Ashley

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_.

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## DETAILED ACTION

### *Specification*

#### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-6 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make, and/or use the invention.

In light of the specification and drawings, it is unclear how the: (1) the housing is longitudinal and pivotally connected to the connector; (2) the blade is pivotally laterally mounted to the housing; and (3) housing is reciprocally circularly moved relative to the connector.

From the drawings, it is clear that any of the above 3 functions can occur. How is the housing connected to the connector to allow for pivoting? Are the miter cuts made by pivoting at the seat 11 or at the connector 23? How is the blade pivotally mounted to the housing? Does the blade really pivot relative to the housing? How is the housing "reciprocally circularly" moved relative to the connector? Is the housing pivotally connected to the connector 23? What motion is defined by the "reciprocally circularly" expression? Is this an oscillation type motion? Does the housing pivot, up and down, relative to the base to make a cut?

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3. Claims 1-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, the phrase "the saw blade laterally rotatably connected to the housing" is confusing, in that, it is awkwardly worded. How is the blade laterally rotatably connected? Better language would be "... blade laterally and rotatably connected to the housing". The phrase "the saw blade having a first belt wheel centrally laterally extending therefrom" is confusing, in that, it is awkwardly worded. How is the wheel centrally laterally extending therefrom? Better language would be "... blade having a first belt wheel centrally and laterally extending therefrom". The phrase "a second belt wheel laterally centrally extending therefrom" is confusing, in that, it is awkwardly worded. How is the wheel centrally laterally extending therefrom? Better language would be "... a second belt wheel centrally and laterally extending therefrom".

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kakimoto et al., U.S. Patent 6,532,853, in view of Meredith et al., U.S. Patent Application 2002/0152867, Ushiwata et al., U.S. Patent 5,424,294, Ito et al. U.S. Patent 5,357,834, and Peterson, U.S. Patent 2,317,553.

Kakimoto et al. discloses the invention substantially as claimed including, e.g., a base member (1/2/4/32); a universal arm (10) pivotally mounted (15) to a rear end of the base member; a housing (3) with a saw blade (25) pivotally connected (see Figures 1 and 3) to the universal arm, the saw blade position laterally and rotatably to the housing. A longitudinally mounted drive device (27), the drive device including: a casing (cover of 27) securely connected to the housing; a motor (see column 5, lines 10-15) mounted within the casing and radially corresponding to the saw blade along a moving direction of the saw blade (that is the motor is positioned in the rear of the saw housing 3).

Kakimoto et al. is silent as to the specific motor orientation and drive transmission and therefore, Kakimoto et al. lacks the saw blade having a first belt wheel, a first worm screw shaft secured to the free end of the motor shaft, a worm gear laterally placed from the worm screw shaft and having a belt wheel, and an endless belt mounted between the two belt wheels.

Meredith et al. discloses that it is old and well known in the art to use motors that are oriented longitudinally relative to the saw blade movement direction for the purpose of allowing for miter saw cuts without the motor interfering with the workpiece or fence.

Ito et al. discloses that it is old and well known in the art to use motors oriented at an angle relative to the blade with worm shafts and gears such that the motor does not interfere with miter cuts of the workpiece.

Ushiwata et al. discloses that it is old and well known in the art to use motor offset from the rotational axis of the saw blade by use of a transmission belt and gear

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pulley for the purpose of allowing for miter saw cuts without the motor interfering with the workpiece while also providing for a speed reduction.

Moreover, Peterson discloses that it is old and well known in the art to use gear and belt transmissions as shown in Figure 4 (motor 49, motor shaft 53, gear 52, belt 59, pulley 57, and second pulley 33) for rotating a blade with speed reduction.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use a motor oriented radially relative the saw blade along a moving direction of the saw blade, wherein the transmission includes a first belt wheel (pulley), a first worm screw shaft secured to the free end of the motor shaft, a worm gear laterally placed from the worm screw shaft and having a belt wheel (pulley), and an endless belt mounted between the two belt wheels with the saw of Kakimoto et al. in order to relocate the motor such that the motor did not interfere with miter cuts as also to allow for speed reduction between the motor and the blade.

### ***Allowable Subject Matter***

6. Claims 2-6 appear to be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. It should be noted that the allowability of claims 2-6 as set forth here is also conditional upon a proper response to the 35 U.S.C. 112, 1<sup>st</sup> paragraph rejection.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

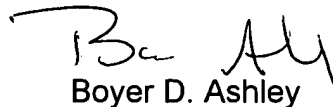
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The prior art references cited but not relied upon were cited to shown similar devices in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Boyer D. Ashley whose telephone number is 571-272-4502. The examiner can normally be reached on Monday-Thursday 7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allan N. Shoap can be reached on 571-272-4514. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Boyer D. Ashley  
Primary Examiner  
Art Unit 3724

BDA  
3/15/05